Amendments to the Claims:

The listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1 (Previously Presented): An apparatus for detecting a block noise generated on an input video signal that has been coded and decoded per pixel block, the apparatus comprising:

a differentiator to differentiate the input video signal per pixel to obtain a differentiated signal;

a detector to detect impulses of the differentiated signal to obtain a detection signal carrying the impulses;

an integrator to integrate the detection signal for every N-th pixel of consecutive M pixels in a horizontal direction and to obtain integrated detection signals corresponding to a first to an M-th pixels, respectively, M being the number of pixels per pixel block in the horizontal direction, and N being an integer among 1 to M; and

a determinator to compare the integrated detection signals and a reference signal to determine whether the block noise is generated on the input video signal, wherein the determinator includes:

a counter to count the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the input video signal;

a plurality of delay sections each delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals for succeeding images in the predetermined unit of image; and

a median section to select a middle count signal among the count signals, which is the middle in level, the middle count signal being compared with the reference signal.

Claims 2 – 7 (Cancelled)

Claim 8 (Previously Presented): A method of detecting a block noise generated on an input video signal that has been coded and decoded per pixel block, comprising the steps of:

differentiating the input video signal per pixel to obtain a differentiated signal;

detecting impulses of the differentiated signal to obtain a detection signal carrying the impulses;

integrating the detection signal for every N-th pixel of consecutive M pixels in a horizontal direction and to obtain integrated detection signals corresponding to a first to an M-th pixels, respectively, M being the number of pixels per pixel block in the horizontal direction, and N being an integer among 1 to M; and

comparing the integrated detection signals and a reference signal to determine whether the block noise is generated on the input video signal, wherein the comparing step includes the steps of:

counting the number of integrated impulses of the integrated detection signal per predetermined unit of image carried by the input video signal;

delaying the counted number by a period decided based on the predetermined unit of image, thus outputting count signals in the predetermined unit of image; and

selecting a middle count signal among the count signals, which is the middle in level, the middle count signal being compared with the reference signal.

Claims 9 – 20 (Cancelled)

Claim 21 (Previously Presented): An apparatus for detecting a block noise generated on an input video signal that has been coded and decoded per pixel block, the apparatus comprising:

a differentiator to differentiate the input video signal at every neighbouring pixel to obtain a differentiated signal;

a first detector to detect solitary differentiated points on the differentiated signal and output a first detection signal having a first level for each solitary differentiated point

and a second level for each portion of the differentiated signal at which no solitary differentiated point is detected; and

a first processor to receive the first detection signal and a first delay signal, output a first addition signal in which the first detection signal and the first delay signal are added to each other and delay the first addition signal by a period corresponding to a total number of pixels in a horizontal direction in each pixel block, the first addition signal thus delayed being fed back to the first processor as the first delay signal, the block noise generated on the input video signal being detected based on the first addition signal.

Claim 22 (Previously Presented): The apparatus according to claim 21 further comprising:

a second detector to receive the first addition signal and output a second detection signal, the second detection signal having a third level when a level of the first addition signal is higher than a first reference level whereas the second detection signal having a fourth level when the level of the first addition signal is equal to or lower than the first reference level; and

a second processor to receive the second detection signal and a second delay signal, output a second addition signal in which the second detection signal and the second delay signal are added to each other and delay the second addition signal by one horizontal line period of the input video signal, the second addition signal thus delayed being fed back to the second processor as the second delay signal, the block noise generated on the input video signal being detected based on the second addition signal.

Claim 23 (Previously Presented): The apparatus according to claim 22 further comprising:

a third detector to receive the second addition signal and output a third detection signal, the third detection signal having a fifth level when a level of the second addition signal is higher than a second reference level whereas the third detection signal having a sixth level when the level of the second addition signal is equal to or lower than the second reference level; and

a counter to count a total number of first signal portions of the third detection signal per frame of the input video signal, each first signal portion having the fifth level, the block noise generated on the input video signal being detected based on the counted number of the first signal portions.

Claim 24 (Previously Presented): The apparatus according to claim 23 further comprising a plural number of delay units to delay a count signal output from the counter by a period corresponding to a specific number of frames of the input video signal, the count signal carrying the counted number per frame of the input video signal, the specific number of frames being equal to the plural number of delay units, the block noise generated on the input video signal being detected based on a middle number among the counted number carried by the count signal and numbers counted for the specific number of frames.

Claim 25 (Previously Presented): A method of detecting a block noise generated on an input video signal that has been coded and decoded per pixel block, comprising the steps of:

differentiating the input video signal at every neighbouring pixel to obtain a differentiated signal;

detecting solitary differentiated points on the differentiated signal and outputting a first detection signal having a first level for each solitary differentiated point and a second level for each portion of the differentiated signal at which no solitary differentiated point is detected; and

receiving the first detection signal and a first delay signal, outputting a first addition signal in which the first detection signal and the first delay signal are added to each other and delaying the first addition signal by a period corresponding to a total number of pixels in a horizontal direction in each pixel block, the first addition signal thus delayed being used as the first delay signal, the block noise generated on the input video signal being detected based on the first addition signal.

Claim 26 (Previously Presented): The method according to claim 25 further comprising the steps of:

receiving the first addition signal and outputting a second detection signal, the second detection signal having a third level when a level of the first addition signal is higher than a first reference level whereas the second detection signal having a fourth level when the level of the first addition signal is equal to or lower than the first reference level; and

receiving the second detection signal and a second delay signal, outputting a second addition signal in which the second detection signal and the second delay signal are added to each other and delay the second addition signal by one horizontal line period of the input video signal, the second addition signal thus delayed being used as the second delay signal, the block noise generated on the input video signal being detected based on the second addition signal.

Claim 27 (Previously Presented): The method according to claim 26 further comprising the steps of:

receiving the second addition signal and outputting a third detection signal, the third detection signal having a fifth level when a level of the second addition signal is higher than a second reference level whereas the third detection signal having a sixth level when the level of the second addition signal is equal to or lower than the second reference level; and

counting a total number of first signal portions of the third detection signal per frame of the input video signal and outputting a count signal carrying a counted number per frame of the input video signal, each first signal portion having the fifth level, the block noise generated on the input signal being detected based on the counted number of the first signal portions.

Claim 28 (Currently Amended): The <u>method</u> ~~apparatus~~ according to claim 27 further comprising the step of delaying the count signal by a period corresponding to a specific number of frames of the input video signal, the block noise generated on the input video

signal being detected based on a middle number among the counted number carried by the count signal and numbers counted for the specific number of frames.